Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229

Comments of the American Association of State Highway and Transportation Officials

The American Association of State Highway and Transportation Officials ("AASHTO"), pursuant to Section 1.415 of the Federal Communication Commission ("FCC" or "Commission") Rules and Regulations, 47 C.F.R. § 1.415, hereby respectfully submits its comments in response to the Commission's *Second Further Notice of Proposed Rulemaking (Second Further Notice)* on implementing a nationwide, broadband interoperable public safety network in the 700 MHz band. AASHTO requests the Commission remain committed to the establishment of a nationwide, interoperable public safety network and reject any proposals which would relegate the network to commercial grade design or control. AASHTO also urges the Commission to carefully weigh any additional restrictions that may be placed on the holder of the Public Safety Broadband License and if any regulatory requirements would apply equally to all non-governmental non-profit public safety license holders.

TABLE OF CONTENTS

The American Association of State Highway and Transportation Officials

AASHTO is a non-profit association of Member Departments, which are those Departments or Agencies of the States of the United States, Puerto Rico, and the District of Columbia in which the official highway responsibility for that State or Territory is lodged, and the United States Department of Transportation, which is an ex-officio member. Membership consists of the following organizations:

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- Arizona Department of Transportation
- Arkansas Department of Transportation
- California Department of Transportation
- Colorado Department of Transportation
- Connecticut Department of Transportation
- Delaware Department of Transportation
- District of Columbia Department of Transportation
- Florida Department of Transportation
- Georgia Department of Transportation
- Hawaii Department of Transportation
- Idaho Transportation Department
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- Massachusetts Highway Department
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The membership of this organization consists solely of instrumentalities of government defined as those Departments or Agencies of the States of the United States, Puerto Rico, and the District of Columbia in which the official transportation agency for that State or Territory is lodged. The United States Department of Transportation is a non-voting ex officio member of this association. Associate, non voting members of the Association include nine Canadian Provinces, Turkey, China, Bridge, Port and Toll Commissions, Districts, and Authorities, major cities and counties, the U. S. Army Corps of Engineers, the U. S. National Park Service, the U. S. Department of Agriculture, and regional Transportation Commissions and Transportation Corridor Agencies.

The Association is organized exclusively to foster the development, operation, and maintenance of a nationwide, transportation system integrating land, sea, air,

rail, and public transit systems and to cooperate with other appropriate agencies in considering matters of mutual interest in serving the public need. The individual members of these constituent organizations collectively form the largest single user group of public safety spectrum and are directly affected by any change in the Commission's Rules or Regulations for land mobile radio. Through its Special Committee on Wireless Communications Technology, AASHTO informs its member departments of pending Commission actions and advocates for the inclusion of all users in any decision that may be reached by the Commission.

I. INTRODUCTION

In July 2007, the Commission broke historic ground with the release of the Second Report and Order for the 700 MHz Band spectrum[1] through assignment of a 10 MHz dedicated portion of the spectrum for the creation of a public/private partnership to address on a national scale the issues of incompatible systems and interoperability. It was the stated intent of the Commission to issue two licenses for adjacent spectrum blocks resulting in a single, nationwide shared network that would address the balkanization of disparate systems found throughout public safety entities. The ten megahertz of public safety spectrum would be paired with an equal allocation of commercial spectrum and shared between the license holders. As this network was to be constructed and operated by the commercial entity, a common technology would provide the basis for the interoperable network. To ensure the requirements of our nation's emergency responce agencies were addressed and met, the Commission instituted strict requirements on both parties. The Commission specified the nature of the entity that would hold the Public Safety Broadband License[2] and the initial parties[3] constituting its Board of Directors.

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[1] *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, WT Docket No 06-150, 22 FCC Rcd 15289. ("*Second Report and Order*"). The *Second Report and Order* was published in the Federal Register on August 24, 2007 (72 Fed. Reg. 48814).

[2] *Id* at 371

[3] *Id* at 374

In anticipation of the Commission's action in regard to the nature of the PSBL holder, the Association of Public-Safety Communications Officials, International ("APCO"), the International Association of Fire Chiefs ("IAFC"), the International Association of Chiefs of Police ("IACP"), and the International Municipal Signal Association ("IMSA") took steps to form a not-for-profit corporation with the sole intent of applying for and being granted the PSBL. The Public Safety Spectrum Trust Corporation was incorporated under District of Columbia laws on June 6, 2007 with APCO, IAFC and IACP providing the corporate officers. On October 10, 2007 the PSST made application to the Commission for the PSBL license which was granted on November 19, 2007.[4]

The PSST, realizing the task of implementing a nationwide broadband network would require knowledge and expertise not found among the Board of Directors at that time prepared a Request For Proposal ("RFP") to solicit a knowledgeable and capable party to act as an agent and advisor. On July 9, 2007 prior to the July 31, 2007 release of the *Second Report and Order*, the PSST released its RFP.[5] On October 5, 2007 the PSST Board of Directors approved the selection of Cyren Call Communications as its advisor.

Between November 19 and the beginning of the "quiet period" before Auction 73, the PSST and its advisor met with many companies they felt would be possible partners to discuss the requirements of the *Second Report and Order* and the PSST's own statement of network requirements contained in its Bidder's Information Document ("Version 2")[6]. As per the Commission's directive all communication between the PSST, its advisor and potential bidders ceased in compliance with the anti-collusion rules contained in the *Second Report and Order*[7] on or about December 4, 2007. As a member of the PSST Board of Directors,

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[4] FCC 07-199 Nov. 19, 2007

[5] PSST Press Release "**The Public Safety Spectrum Trust Corporation Issues Request for Proposals For 700 MHz Agent/Advisor**", July 9, 2007.

[6] http://www.psst.org/documents/BID2_0.pdf

[7] *Second Report and Order*, 22 FCC Rcd 15289 (2007) (*Second Report and Order*) at ¶¶ 285-286.

AASHTO complied with the request of the Commission and PSST Chairman in not discussing any aspect of the auction until the "quiet period" ended April 3, 2008.

II. AASHTO COMMENTS

In the instant proceeding[8] the Commission seeks comment on a broad range of questions, proposed procedures, and issues. Among the issues the Commission is seeking comment are:

- the potential for requirements that the Public Safety Broadband Licensee be a non-profit organization and that no for-profit entities, apart from certain outside advisors or counsel, be involved;
- whether or not it would be appropriate for the Public Safety Broadband Licensee or any of its agents, advisors, or service providers to serve as a mobile virtual network operator to manage access and use of the 700 MHz D Block of spectrum by first responders;
- whether to license the D Block and public safety broadband spectrum on a regional basis;
- rules governing public safety priority access to the network during emergencies;
- the performance requirements and license term;
- various fees associated with the shared network;
- the process for the D Block licensee and the Public Safety Broadband Licensee to negotiate a Network Sharing Agreement; and,
- auction-related issues, such as whether to restrict auction participation and how to determine a reserve price.[9]

AASHTO has consolidated and grouped many similar and inter-related items into its response.

1. Regarding the structure and criteria of the Public Safety Broadband Licensee

The Commission stated: "We also seek comment on possible clarifications of or changes to the rules governing the structure and criteria of the Public Safety Broadband Licensee,[10] including whether to clarify further the requirement that the

[8] *Second Further Notice Of Proposed Rulemaking*, FCC Docket 08-128, May 24, 2008

[9] http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-282151A1.doc

[10] *See* 47 U.S.C. § 316 (permitting the Commission to modify any license if, in the judgment of the Commission, such action will promote the public interest, convenience, or necessity).

Public Safety Broadband Licensee must be a non-profit organization."[11] The Commission's current requirements for the Public Safety Broadband Licensee far exceed those of any other non-profit, non-governmental organization ("NGO") authorized to hold a Commission license in any service. The PSST operates as an association of associations. Each representative of the organizations forming the Board of Directors and directing the operations of the PSST is drawn from their individual organization's membership whose practices are in compliance with Federal law under the Internal Revenue Service code. AASHTO urges the Commission strongly consider if the imposition of any additional conditions, mandates, or restrictions placed on one not-for-profit licensee would apply equally to all other not-for-profit licensees. The Commission's concern the holder of the PSBL is representative of all public safety groups is acknowledged and applauded.

2. Regarding a nationwide broadband Public/Private Partnership and Network

The Commission also sought comment on whether the public interest would best be served by the development of a nationwide, interoperable wireless broadband network for both commercial and public safety services through the 700 MHz Public/Private Partnership between the D Block licensee and the Public Safety Broadband Licensee, and whether we should therefore continue to require that the D Block licensee and Public Safety Broadband Licensee enter into the 700 MHz Public/Private Partnership.[12] AASHTO believes any departure from this course will have disastrous effects on the entire public safety community in the future.

Without a single network using a common technology as its basis, our nation's emergency responce and disaster relief workers will continue to be hampered in their ability to respond to any call for assistance in the wake of a natural or man caused situation. Unless all agencies have access to a single network spanning both traditional first responder requirements and critical infrastructure many lives will be placed in needless peril. Police, Fire, Medical

[11] *Supra* note 8 at ¶ 21

[12] *Id* at ¶ 54

services all need to talk together and work with transportation to ensure routes are open, bridges are safe and heavy equipment is available. Utility companies must be included to restore essential services including power, water, sanitation, and telephone service. All agencies must be ready to respond to any hazard under a unified command structure bringing needed resources to the scene in concert utilizing a common, nationwide communications network.

The Commission also seeks comment on any statuary and rule changes clarifying the licensing of the Public Safety Broadband License.[13] The changes contemplated by the Commission would have far reaching effects. The changes contemplated could change the way any non-profit holding an authorization under FCC rules and regulation interacts with its constituents and the Commission. Many volunteer fire companies are organized as non-profits along with medical center facilities. Imposition of FCC regulations above those requirements of the U. S. Treasury Department's Internal Revenue Service only obfuscate the issue and do not add clarity or transparency.

The Commission has also sought comment on the technical aspects of the shared network[14] including if the resultant network should have or provide the following four requirements:

1. Sufficient signal coverage to ensure reliable operation throughout the service area consistent with typical public safety communications systems (i.e., 99.7 percent or better reliability).[15]
2. Sufficient robustness to meet the reliability and performance requirements of public safety. To meet this standard, network specifications must include features such as hardening of transmission facilities and antenna towers to

[13] *Id* at ¶ 28

[14] *Id* at ¶61

[15] *Id* at ¶59

withstand harsh weather and disaster conditions, and backup power sufficient to maintain operations for an extended period of time.

3. Sufficient capacity to meet the needs of public safety, particularly during emergency and disaster situations, so that public safety applications are not degraded (i.e., increased blockage rates and/or transmission times or reduced data speeds) during periods of heavy usage.

4. Security and encryption consistent with state-of-the-art technologies.

AASHTO firmly believes the Commission has raised the relevant questions regarding the network reliability and performance. The questions regarding coverage are dependent on many factors. Public Safety systems are normally engineered to provide coverage over the largest possible area within the jurisdictional boundaries of the serving entity while commercial systems are normally engineered to provide coverage over the most densely populated areas. Most public safety infrastructure is engineered to provide coverage during catastrophic events through hardened transmission facilities and reinforced antenna structures with sufficient power to continue operating for extended periods when commercial power is unavailable.

The ability of a public safety system to meet the capacity needs of its users cannot be directly compared to a commercial system. The number of emergency responders in any given area is limited and unlikely to experience rapid change in the number of users requiring access. Unlike commercial networks where the duration of a connection is often measured in minutes, public safety systems have traditionally been limited to dispatch services using short duration messages measured in seconds allowing more users to reuse the same communications channel. However, public safety systems are engineered to provide an almost immediate access to the bandwidth in any crisis. Short, bursty voice transmissions providing directions and commands cannot be compared to the casual conversations normally carried over commercial networks. When urgent needs arise and great numbers of users attempt to utilize a commercial network the difference in

utilization modes between casual conversations or observations quickly overwhelms the available capacity of the network in the vicinity of the incident resulting in network access delays measured in minutes.

Emergency responders require immediate access to network facilities to both send and receive instruction and command. Emerging technologies also enable video relays between the scene of the incident and the command center allowing incident commanders to effectively marshal resources to the point of need. Wideband and broadband data will allow graphical displays with the floor plan for a building and the current position of all responders pinpointed requiring preemptive access to the shared public safety spectrum. A normal citizen may be inconvenienced when their transmission is interrupted or delayed. Delay of a responder's request may result in the loss of life or further damage to property or critical infrastructure. Public safety emergency responders must have the ability to preempt commercial traffic on their portion of the shared network.

Digital networks have a minimal form of encryption from the very nature of encoding analog speech into digital transmissions. There are specific needs for higher levels of encryption in many instances required by the type of activity being undertaken. Secure networks have to be put in place to handle sensitive information while administrative uses would not require encryption beyond the digitization process. The shared network must be able to respond to the requirements of it users by operating as a transparent transmission medium with encryption / decryption activities being applied external to the wireless infrastructure.

The Commission also asks how the Commission can exercise better oversight over the activities of the Public Safety Broadband Licensee and the commercial partner and what additional measures, if any, should the Commission take to ensure the appropriate level of oversight.[16] The Commission has structured the

[16] *Id* at ¶¶ 48 and 51

Board of Directors for the PSST by naming each of the entities to serve as directors. Additional representation by the FCC or Congress on the PSST through adding Board members could create a body so unwieldy it is unable to react to the ever changing needs of its users in a timely manner. Increasing the reporting activities of the PSBL will have significant impact as the cost of providing reports and documentation would have to be recovered in additional fees paid by the network user.

AASHTO believes involving State governments having (or other entities that have or plan interoperable networks for the benefit of public safety) to assume responsibility for coordinating the participation of the public safety providers in their jurisdictions[17] may be beneficial in some aspects, however AASHTO notes networks operated by States for users other than State agencies is voluntary and cannot be impelled.

The Commission also seeks comment on whether to adopt changes to the requirements of the network that the D Block licensee is required to construct, and whether to modify the required schedule for that construction[18]. AASHTO believes changes are required to the schedule put forward by the Commission. The goal of reaching 99.3% of the population within ten years from the issuance of a license is admirable and perhaps can remain as an ultimate goal, but with an increased time span to achieve the goal.

3. Regarding Proposed Clarification of Authorized Users and the Structure of the PSBL

The Commission seeks comment on "whether we should continue to require that the D Block licensee provide the Public Safety Broadband Licensee with priority access, during emergencies, to the spectrum associated with the D Block license." The Commission attempted to further clarify their thinking on this matter by

[17] *Id* at ¶ 52

[18] *Id* at ¶ 58

further defining conditions under which access may be required to the commercial spectrum[19]. AASHTO notes the conditions proposed encompass both planned and unplanned events and disasters. Planned events can be categorized as including warnings issued by agencies of impending events such as hurricanes and flooding while unplanned events include other phenomena such as tornadoes, earthquakes, man made disasters including acts of terrorism or the threat of terrorism. The Commission has grasped the concept we must be ready to respond to all hazards, both natural and man caused, but by excluding critical infrastructure from participating in the shared network has prevented our responders from establishing a fully integrated response network. With critical infrastructure excluded from the network, additional lives will be lost or placed in increased peril when critical infrastructure crews cannot be dispatched to clear roads or restore essential services such as electrical power, clean water, and sanitation. The implications of a strict interpretation of 47 U.S. C. 337 (The Communications Act of 1934 as Amended) in defining who is eligible for access, either as a user or priority user is counter to the needs of citizens in an emergency. The traditional first responders, police, fire, and emergency medical services cannot function without the aid and support of critical infrastructure agencies. AASHTO believes the people most qualified to determine who is needed at the scene of an incident is the person or persons acting in the role of Incident Commander as defined under the National Incident Management System (NIMS). As Chief Charles Werner of the Charlottesville, Virginia Fire Department remarked at the Silicon Flatirons Summit on Information Policy held in Washington, D.C. on June 6, 2008, "If I have a person trapped in a car with wires down, the utility crew is a "First Responder" in my book."

The Commission also seeks comment on limiting priority access to the geographical or jurisdictional boundary directly affected by an emergency event. While all disasters or incidents start and end with local response, attempting to

[19] *Id* at ¶¶ 85 – 86

limit priority access to those in the immediate vicinity would impact the response of specialized teams responding from outside the area. Urban search and rescue teams are highly trained and specialized. Should an incident occur requiring their response from another part of the country the proposed clarification would prevent the local incident commander from securing priority network access needed for response planning. Requests for priority access must not be limited to the geographical or jurisdictional boundaries but be determined by the type of response required as authorized by the PSBL.

AASHTO believes emergency responders would require access to the commercial network under control of the D Block provider only in the most extreme instances however, any commercial traffic on the public safety portion of the network is subject to ruthless preemption as agreed in the negotiated Network Sharing Agreement (NSA) between the PSBL and the D Block licensee.

AASHTO believes the relocation of existing narrowband users should be grandfathered until there are funding mechanisms in place to reimburse public safety agencies for the costs involved in retuning or replacing equipment incapable of being retuned. AASHTO subscribes to the comments of NPSTC and the PSST regarding the cost of this relocation and who should bear the expense involved. AASHTO agrees with the Commission on using rolling dates for the relocation of existing users coupled with the availability of the network in their area.[20]

4. Regarding financial and business issues related to the establishment of the 700 MHz Public/Private Partnership

The Commission has raised several questions regarding the financial and business issues related to the partnership and in particular regarding the PSBL. The Commission seeks guidance on if it should create a set of conditions that would prevent the PSBL from obtaining necessary operating revenue through arrangements with commercial vendors and rely on the largess of various agencies

[20] *Id* at ¶ 181

not under control of the Commission to provide funding. In fact, some of the agencies proposed by the Commission as possible sources are precluded by law from providing funding to the PSBL.

The PSBL, and each of the entities currently forming its Board of Directors are all organized under the provision of the Department of Treasury's Internal Revenue Service code section 501(c). The Commission has been repeatedly assured the current licensee, the PSST is governed by its Board of Directors and there will be no changes unless directed by the Commission or other regulatory body.

The PSST must be allowed to enter into agreements with commercial entities, and if needed engage in what could be considered commercial practices in order to obtain the necessary funds to support its operation and provide for the testing and certification of devices and services offered to public safety. The Commission should, and rightly so, ensure the requirements of the Internal Revenue Service Tax Code are followed in all dealings involving the PSBL.[21]

III. Summary

AASHTO strongly cautions the Commission from departing from the Public Private Partnership course it so strongly championed with the release of the Second Report and Order. The attention focused on the failure of the D Block to be awarded at Auction 73 has been the cause of much investigation and attempts to fix blame. AASHTO agrees there are procedures requiring modification however the course is not to increase the number of regulations, but to reduce the regulations to allow commerce to function. Additional controls on the PSBL do nothing but hinder its ability to represent all of Public Safety while reducing its ability to function as an equal partner in the endeavor. Albert Einstein is regarded as one of the most intelligent people to have ever lived. When asked to explain how messages are sent without wires he was quoted as saying, "The wireless telegraph is not difficult to understand. The ordinary telegraph is like a very long cat. You pull the tail in New

[21] *Id* at ¶¶ 42, 44. See also *Second Report and Order*, 22 FCC Rcd at 15454 ¶ 470.

York, and it meows in Los Angeles. The wireless is the same, only without the cat." AASHTO cautions the Commission against killing the cat through micromanagement and needless regulation that cannot be equally applied to all non-profit licensees.

Respectfully submitted,

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